Joshua McIntosh
Air Team Lead

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January 24, 2013

Carey Bylin
Natural Gas Star Program
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW (MC6207-J)
Washington, DC 20460

Dear Ms. Bylin,

Please find enclosed the 2011 Annual Report for Chevron North America Exploration and Production Company's MidContinent Business Unit (MCBU). Want to apologize for any confusion this may have caused in submitting this report prior to this time.

If you have any questions, do not hesitate to contact Jerry Harrington at (713) 372-1886 or jerry.harrington@chevron.com

Sincerely,

Joshua McIntosh

Enclosure: 2011 EPA Natural Gas STAR Report

Natural Gas STAR Program
MidContinent Business Unit
2011 Methane Emission Reductions

January 24, 2013

Chevron has been a participant in the Natural Gas STAR program since 1995. The program is a voluntary partnership between the EPA and the oil and gas industry to encourage methane emissions reductions among natural gas producers, processors, and transmission companies. As a partner, Chevron is required to annually report our methane emissions reductions. Below is a summary of the 2011 MCBU results, collected through collaboration HES Specialists, Compressor Optimization Specialists and a review of the MCBU capital project list.

Projects		Methane Reductions [1]		$ Spent	Value of Gas Saved [2]
6	Flares	12.0	MMCF	$175,836	$84,000
47	Plunger Lifts	220.9	MMCF	$3,055,636	$1,546,300
55	Pumping Units	53.5	MMCF	$2,401,904	$374,605
20	Velocity Strings	93.6	MMCF	$571,542	$655,200
2	Electric Compressor	0.6	MMCF	$145,812	$3914
1	Soap Units	2.5	MMCF	$2,750	$17,640
6	Solar Pumps	2.1	MMCF	$18,000	$14,767
5	Instrument Air	28.9	MMCF	$252,281	$202,356
7	VRUs	211.5	MMCF	$589,194	$1,480,479
149	**TOTAL**	**625.6**	**MMCF**	**$7,212,957**	**$4,379,261**

1. Most methane reductions are calculated using emissions factors provided by the EPA NG STAR program
2. Gas value based on $7/mcf

Annual Report 2005

Production Sector

Company Information

Company Name:	Chevron North America Exploration and Production Company MidContinent Business Unit
Gas STAR Contact:	Bruce Beynon
Title:	Environmental Team Leader
Address:	P.O. Box 36366
City, State, Zip Code:	Houston, TX 77236
Telephone:	(281) 561-3689
Fax:	(281) 561-3702
E-mail:	bbey@chevron.com

Annual Report Summary

Please mark the Best Management Practices your company implemented and submit a report page for only those practices

- ☒ BMP 1: Identify and replace high-bleed pneumatic devices
- ☐ BMP 2: Install flash tank separators on glycol dehydrators
- ☒ BMP 3: Partner Reported Opportunities (*Please specify)*

Period covered by report: From: January 2005 To: December 2005

Signature: Bruce Beynon Date: August 31, 2006

* In addition to reporting methane emissions reductions, you are welcome to include other information about your company's participation in Natural Gas STAR in the "Additional Program Accomplishments" section of this form. The Natural Gas STAR Program will use any information entered in this section to recognize the efforts and accomplishments of outstanding partners.

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Production Sector Annual Report

BMP 1: Identify and Replace High-Bleed Pneumatic Devices

Current Year Activities

A. Facility summary:

Number of devices replaced: 176 devices

Percent of system now equipped with low/no-bleed units: NDA %

B. Cost summary:

Estimated cost per replacement (including equipment and labor): $100 /replacement

C. Methane emissions reduction: 21824 Mcf

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

☐ Standard calculation

Methane emissions reduction
= [Annual emissions from high-bleed devices being replaced (in Mcf/yr)
- Annual emissions for the replacement devices (in Mcf/yr)]
x Number of devices replaced

Please specify your data source:
☐ Field measurement
☐ Manufacturer specifications

☒ Calculation using default

Methane emissions reduction
= 124 Mcf/yr x Number of devices replaced

☐ Other (*Please specify)*

D. Total value of gas saved: $ 131,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

E. How many high-bleed devices do you plan to replace next year? 0 devices

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	# Devices Replaced	Total Cost of Replacements (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 1 Comments: *Please use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 2: Install Flash Tank Separators on Glycol Dehydrators

Current Year Activities

A. Facility summary:

Number of flash tank separators installed: _____ separators

Percent of dehydrators in system equipped with flash tank separators: _____ %

B. Cost summary:

Estimated cost per flash tank separator installation (including equipment and labor): $ _____ /installation

C. Methane emissions reduction: _____ Mcf

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

☐ Standard calculation

Methane emissions reduction per flash tank installation = [TEG circulation rate (in gal/hr) x Methane entrainment rate (in scf/gal) x hours of operation (in hrs/yr) x 0.90] / 1,000*

**If methane entrainment rate is not known, use a default value of 3 scf/gal for energy exchange pumps or 1 scf/gal for electric pumps*

Please specify your data source:

☐ Field measurement
☐ Manufacturer specifications

☐ Calculation using default

Methane emissions reduction = [Average gas throughput (in MMcf/yr) x 170 scf/MMcf x 0.90] / 1,000

☐ Other (*Please specify*)

D. Total value of gas saved: $ _____

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

E. How many flash tank separators do you plan to install next year? _____ flash tanks

Previous Years' Activities

Use the table below to report any past activities implemented, but <u>not previously reported</u> to the Natural Gas STAR Program

Year	# Flash Tank Separators Installed	Total Cost of Installation (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

<u>BMP 2 Comments:</u> *Please use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☒ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☐ Other *(Please specify)*: _____

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 4 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 8000 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $88,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 48,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case assessments

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Plunger lifts

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 68 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 319,600 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): _____ $759,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 1,918,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Pumping units

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 2 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 1,946 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ 18,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 12,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

H. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Velocity strings

Please describe how your company implemented this practice/activity:

I. Level of Implementation *(check one)*:

- ☒ Number of units installed: 10 units
- ☐ Frequency of practice: _____ times/year

J. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

K. Methane emissions reduction: 46,800 Mcf

L. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $138,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 280,800

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

M. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

N. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Electric compressors

Please describe how your company implemented this practice/activity:

O. Level of Implementation *(check one)*:

- ☒ Number of units installed: 3 units
- ☐ Frequency of practice: _____ times/year

P. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

Q. Methane emissions reduction: 327 Mcf

R. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ 338,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 2,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

S. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

T. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Flareless completions

Please describe how your company implemented this practice/activity:

U. Level of Implementation *(check one)*:

- ☐ Number of units installed: _____ units
- ☒ Frequency of practice: 23 times/year

V. Are these emissions reductions *(check one)*:

- ☐ Continuing/ongoing
- ☒ One-time

W. Methane emissions reduction: 365,000 Mcf

X. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): not reported

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☒ Calculation using manufacturer specifications/other source
- ☐ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 2,190,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

Y. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

Z. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Flareless workovers

Please describe how your company implemented this practice/activity:

AA. Level of Implementation *(check one)*:

- ☐ Number of units installed: _____ units
- ☒ Frequency of practice: 9 times/year

BB. Are these emissions reductions *(check one)*:

- ☐ Continuing/ongoing
- ☒ One-time

CC. Methane emissions reduction: 23,152 Mcf

DD. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ not reported

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☒ Calculation using manufacturer specifications/other source
- ☐ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 139,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

EE. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector
Annual Report

Additional Program Accomplishments

The Natural Gas STAR Program will use any information entered here to recognize the efforts and achievements of outstanding partners.

Please include any additional information you would like to share about your company's participation in Natural Gas STAR. Examples may include:

- **Activities to strengthen your program (e.g., training/education, innovative technologies or activities, pilot projects, employee incentive programs).**
- **Efforts to communicate your participation and successes (e.g., internal newsletters, press releases, company Web site).**
- **Participation in Natural Gas STAR program activities (e.g., contributions to case studies, presentation at annual workshop).**

Additional Accomplishments:

Additional Accomplishments: *Please use the back of the page for additional space if needed.*